

a segment of a video sequence as recited in the independent claims in the present patent application. Claims 8 and 9 were discussed as exemplifying how this representative frame is selected and used in generating the second portion of the video segment. The Examiners pointed out that in col. 7, lines 59-63, Edgar refers to an automatic selection process that may be used to combine scene segments.

Claims 1-10, 12-21 and 23 were rejected under 35 U.S.C. 102(b) over Edgar, while claims 11 and 22 were rejected under 35 U.S.C. 103(a) over Edgar. In response to the preceding Official Action in this case, Applicant amended independent claims 1, 12 and 23 in order to clarify the distinction of the present invention over Edgar. In brief, amended claim 1 recites a method for organizing a sequence of video frames made up of first and second portions in the following manner:

1) Starting from an initial frame, the first portion of a segment is defined by adding subsequent, similar frames to the segment.

2) One of the frames in the first portion is chosen to be the representative frame for the entire segment.

3) Using this selected representative frame, the computer then goes on (automatically) to add to the segment further frames having a measure of similarity to the representative frame that is within a predefined bound in order to make up the second portion of the segment. In other words, after selecting the representative frame, the computer automatically measures the similarity between the representative frame and subsequent frames, and uses this similarity in determining which subsequent frames to add to the segment.

Edgar describes a method for video editing by locating segment boundaries and reordering segment sequences. A computerized process analyzes digitized video source material and identifies boundaries of segments or scene changes (col. 4, lines 13-17). Once the system has determined all relevant scene changes, it attempts to find the most representative image from each scene sequence to represent that sequence (col. 12, lines 1-13). Selection of the representative frame is the last automatic step that Edgar describes, as shown in step 105 of the flow chart in Fig. 5C. Edgar makes no suggestion that this representative frame could be

part of some subsequent automatic process for adding frames to the segment, as required by claim 1.

After the segments have been identified in this manner, Edgar's representative frames are displayed, permitting a user to perform video editing by manipulating these representative frames (col. 3, lines 34-46). According to Edgar, the user may consolidate selected representative frames ("stills") in order to put together a "meaningful collection of video from the user's perspective, which was not necessarily sequential as originally created..." (col. 4, lines 51-57). Edgar makes no suggestion that could have led a person of ordinary skill to implement this subjective step automatically, under control of program instructions. This distinction was the basis for Applicant's amendment of the independent claims in this case.

In her "Response to Arguments" in the present Official Action, Examiner Muhebbullah stated that "Edgar does teach the addition of frames according to a selected frame (col. 3, lines 34-38)." It is believed that the Examiner has misinterpreted the cited passage, which is a brief and general statement from Edgar's Summary of the Invention and does not disclose the substance of claim 1. Rather, this passage appears to refer to the idea of selective playback of video segments by a user of Edgar's system, as is illustrated generally in Figs. 2-4 and described more specifically in cols. 4-6. (See particularly col. 6, lines 16-27.) There is no suggestion in the cited passage that a computer might use the representative frame to automatically generate a second portion of a segment, as recited in claim 1.

In rejecting claim 1, the Examiner also made passing reference to col. 7, lines 59-63, in Edgar, which relates to "eliminating or combining identified scene segments and corresponding still frames." To understand this passage, it is necessary to look to its context. In the paragraph in question (beginning at col. 7, line 32), Edgar notes that his system might display, together with each representative frame, the starting and ending frame numbers of the scene that is

associated with the representative frame. In one embodiment, the system could also determine a value specifying the likelihood that the “particular still frame” (i.e., the end frame, or perhaps the starting frame) corresponds to a “true scene boundary.” Presumably, if the likelihood value is low, the user (or automated process) may choose to combine the current segment with the next one.

Edgar gives no explanation as to how such a “likelihood value” is to be calculated, and he makes no suggestion that the likelihood value might somehow relate to the representative frame. Thus, he certainly cannot be taken to teach or suggest the specific method of sequence generation recited in claim 1: determining that a measure of similarity between the representative frame and subsequent frames in the video sequence is within a predefined bound. As stated in MPEP 2131:

To anticipate a claim, the reference must teach every element of the claim.

“The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Edgar does not meet this burden.

Therefore, Applicant respectfully submits that claim 1 is patentable over the cited art. In view of the patentability of claim 1, claims 2-11, which depend from claim 1, are believed to be patentable, as well.

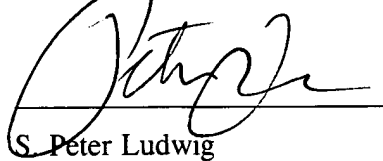
Claim 12 recites apparatus for organizing a sequence of video frames, while claim 23 recites a computer software product, both of which operate on principles similar to the method recited in claim 1. These claims were rejected on grounds similar to the grounds of rejection cited against claim 1. Therefore, Applicant respectfully submits that claims 12 and 23 are patentable over the cited art, as are claims 13-22, which depend from claim 12.

Applicant believes the remarks stated above to be fully responsive to all of the objections and grounds of rejection raised by the Examiner. In view of these

remarks, all the claims in the present patent application are believed to be in condition for allowance. Prompt notice to this effect is requested.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read 'S. Peter Ludwig', is written over a horizontal line.

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